LEO CONSTRUCTION & CONSULTANCY

ENGINEERING PROJECT CONSULTANTS

Job No.: LEO/BBMP/W.No.03/2020-21

Date: 09.10.2020

TEST REPORT

CLIENT	:	Executive Engineer, Yelahanka Division, BBMP, Bengaluru.
AGENCY	:	Sri.R.Ranganath, No:37,19th Cross, 1st N Block, Rajajinagara, Mahalakshmipuram, Bangalore-560010
NAME OF THE WORK	:	Improvements to roads and drains at BHEL Layout and surrounding areas in ward no. 03, Attur
SAMPLE ID	:	Cement (ACC – OPC 53 Grade)
DATE OF MANUFACTURE	:	October - 2020
DATE OF TESTING	:	06.10.2020 to 09.10.2020
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 12269-1987
1	a) Initial Setting Time	IS-4031 (Part -5)	129 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	373 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	28.50 %	-

Note:

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LEO CONSTRUCTION & CONSULTANCY

ENGINEERING PROJECT CONSULTANTS

Job No.: LEO/BBMP/W.No.03/2020-21

Date: 16.10.2020

TEST REPORT ON CONCRETE CUBES

Client : Executive Engineer, Yelahanka Division, BBMP, Bengaluru.

Agency : Sri.R.Ranganath, No:37,19th Cross, 1st N Block, Rajajinagara, Mahalakshmipuram, Bangalore-560010

Name of the work : Construction of RCC drain and culverts at balance roads Brundavana layout and Santhoshnagara (Law College) and surrounding areas in ward no:03 Attur of Yelahanka satellite town sub division

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{10}

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	09.10.2020	16.10.2020	8.101	195.3	8.68
2	09.10.2020	16.10.2020	8.119	199.7	8.88
3	09.10.2020	16.10.2020	8.132	201.5	8.96

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LEO CONSTRUCTION & CONSULTANCY

ENGINEERING PROJECT CONSULTANTS

Job No.: LEO/BBMP/W.No.03/2020-21

Date: 16.10.2020

TEST REPORT ON CONCRETE CUBES

Client	: Executive Engineer, Yelahanka Division, BBMP, Bengaluru.
Agency	: Sri.R.Ranganath, No:37,19th Cross, 1st N Block, Rajajinagara, Mahalakshmipuram, Bangalore-560010
Name of the work	: Construction of RCC drain and culverts at balance roads Brundavana layout and Santhoshnagara (Law College) and surrounding areas in ward no:03 Attur of Yelahanka satellite town sub division
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{10}
Compressive Strength as on	: 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	09.10.2020	16.10.2020	8.118	186.3	8.28
2	09.10.2020	16.10.2020	8.139	190.7	8.48
3	09.10.2020	16.10.2020	8.127	194.3	8.64

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LEO CONSTRUCTION & CONSULTANCY

ENGINEERING PROJECT CONSULTANTS

Job No.: LEO/BBMP/W.No.03/2020-21

Date: 07.11.2020

TEST REPORT ON CONCRETE CUBES

Client : Executive Engineer, Yelahanka Division, BBMP, Bengaluru.

Agency : Sri.R.Ranganath, No:37,19th Cross, 1st N Block, Rajajinagara, Mahalakshmipuram, Bangalore-560010

Name of the work : Construction of RCC drain and culverts at balance roads Brundavana layout and Santhoshnagara (Law College) and surrounding areas in ward no:03 Attur of Yelahanka satellite town sub division

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{10}

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	10.10.2020	07.11.2020	8.145	276.2	12.28
2	10.10.2020	07.11.2020	8.157	287.6	12.78
3	10.10.2020	07.11.2020	8.141	295.2	13.12

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LEO CONSTRUCTION & CONSULTANCY

ENGINEERING PROJECT CONSULTANTS

Job No.: LEO/BBMP/W.No.03/2020-21

Date: 07.11.2020

TEST REPORT ON CONCRETE CUBES

Client	: Executive Engineer, Yelahanka Division, BBMP, Bengaluru.
Agency	: Sri.R.Ranganath, No:37,19th Cross, 1st N Block, Rajajinagara, Mahalakshmipuram, Bangalore-560010
Name of the work	: Construction of RCC drain and culverts at balance roads Brundavana layout and Santhoshnagara (Law College) and surrounding areas in ward no:03 Attur of Yelahanka satellite town sub division
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{10}
Compressive Strength as on	: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	10.10.2020	07.11.2020	8.154	278.6	12.38
2	10.10.2020	07.11.2020	8.162	285.0	12.67
3	10.10.2020	07.11.2020	8.174	296.3	13.17

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ENGINEERING PROJECT CONSULTANTS

Job No.: LEO/BBMP/W.No.03/2020-21

Date: 21.10.2020

TEST REPORT ON CONCRETE CUBES

Client : Executive Engineer, Yelahanka Division, BBMP, Bengaluru.

Agency : Sri.R.Ranganath, No:37,19th Cross, 1st N Block, Rajajinagara, Mahalakshmipuram, Bangalore-560010

Name of the work : Construction of RCC drain and culverts at balance roads Brundavana layout and Santhoshnagara (Law College) and surrounding areas in ward no:03 Attur of Yelahanka satellite town sub division

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	14.10.2020	21.10.2020	8.186	346.9	15.42
2	14.10.2020	21.10.2020	8.162	356.2	15.83
3	14.10.2020	21.10.2020	8.190	340.1	15.12

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LEO CONSTRUCTION & CONSULTANCY

ENGINEERING PROJECT CONSULTANTS

Job No.: LEO/BBMP/W.No.03/2020-21

Date: 22.10.2020

TEST REPORT ON CONCRETE CUBES

Client : Executive Engineer, Yelahanka Division, BBMP, Bengaluru.

Agency : Sri.R.Ranganath, No:37,19th Cross, 1st N Block, Rajajinagara, Mahalakshmipuram, Bangalore-560010

Name of the work : Construction of RCC drain and culverts at balance roads Brundavana layout and Santhoshnagara (Law College) and surrounding areas in ward no:03 Attur of Yelahanka satellite town sub division

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.10.2020	22.10.2020	8.137	351.1	15.60
2	15.10.2020	22.10.2020	8.126	359.3	15.97
3	15.10.2020	22.10.2020	8.150	368.2	16.36

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LEO CONSTRUCTION & CONSULTANCY

ENGINEERING PROJECT CONSULTANTS

Job No.: LEO/BBMP/W.No.03/2020-21

Date: 12.11.2020

TEST REPORT ON CONCRETE CUBES

Client : Executive Engineer, Yelahanka Division, BBMP, Bengaluru.

Agency : Sri.R.Ranganath, No:37,19th Cross, 1st N Block, Rajajinagara, Mahalakshmipuram, Bangalore-560010

Name of the work : Construction of RCC drain and culverts at balance roads Brundavana layout and Santhoshnagara (Law College) and surrounding areas in ward no:03 Attur of Yelahanka satellite town sub division

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.10.2020	12.11.2020	8.222	513.4	22.82
2	15.10.2020	12.11.2020	8.211	529.3	23.52
3	15.10.2020	12.11.2020	8.205	500.3	22.24

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ENGINEERING PROJECT CONSULTANTS

Job No.: LEO/BBMP/W.No.03/2020-21

Date: 12.11.2020

TEST REPORT ON CONCRETE CUBES

Client : Executive Engineer, Yelahanka Division, BBMP, Bengaluru.

Agency : Sri.R.Ranganath, No:37,19th Cross, 1st N Block, Rajajinagara, Mahalakshmipuram, Bangalore-560010

Name of the work : Construction of RCC drain and culverts at balance roads Brundavana layout and Santhoshnagara (Law College) and surrounding areas in ward no:03 Attur of Yelahanka satellite town sub division

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.10.2020	12.11.2020	8.216	502.2	22.32
2	15.10.2020	12.11.2020	8.223	495.3	22.01
3	15.10.2020	12.11.2020	8.240	507.0	22.53

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LEO CONSTRUCTION &CONSULTANCY

ENGINEERING PROJECT CONSULTANTS

Job No.: LEO/BBMP/W.No.03/2020-21

Date: 12.11.2020

TEST REPORT ON CONCRETE CUBES

Client : Executive Engineer, Yelahanka Division, BBMP, Bengaluru.

Agency : Sri.R.Ranganath, No:37,19th Cross, 1st N Block, Rajajinagara, Mahalakshmipuram, Bangalore-560010

Name of the work : Construction of RCC drain and culverts at balance roads Brundavana layout and Santhoshnagara (Law College) and surrounding areas in ward no:03 Attur of Yelahanka satellite town sub division

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.10.2020	12.11.2020	8.212	512.3	22.77
2	15.10.2020	12.11.2020	8.232	519.9	23.11
3	15.10.2020	12.11.2020	8.206	501.0	22.27

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LEO CONSTRUCTION & CONSULTANCY

ENGINEERING PROJECT CONSULTANTS

Job No.: LEO/BBMP/W.No.03/2020-21

Date: 23.10.2020

TEST REPORT ON CONCRETE CUBES

Client : **Executive Engineer,** Yelahanka Division, BBMP, Bengaluru.

Agency : **Sri.R.Ranganath,** No:37,19th Cross, 1st N Block, Rajajinagara, Mahalakshmipuram, Bangalore-560010

Name of the work : **Construction of RCC drain and culverts at balance roads Brundavana layout and Santhoshnagara (Law College) and surrounding areas in ward no:03 Attur of Yelahanka satellite town sub division**

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	16.10.2020	23.10.2020	8.133	357.1	15.87
2	16.10.2020	23.10.2020	8.181	343.0	15.24
3	16.10.2020	23.10.2020	8.166	332.6	14.78

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LEO CONSTRUCTION & CONSULTANCY

ENGINEERING PROJECT CONSULTANTS

Job No.: LEO/BBMP/W.No.03/2020-21

Date: 16.10.2020

TEST RESULTS OF PHYSICAL PROPERTIES OF REINFORCEMENT STEEL

Client : Executive Engineer, Yelahanka Division, BBMP, Bengaluru.

Agency : Sri.R.Ranganath, No:37,19th Cross, 1st N Block, Rajajinagara, Mahalakshmipuram, Bangalore-560010

Name of Work : Construction of RCC drain and culverts at balance roads Brundavana layout and Santhoshnagara (Law College) and surrounding areas in ward no:03 Attur of Yelahanka satellite town

Sample Identification : 8mm,10mm Fe 500 TMT Bars

Technical Reference : IS 1786:2008, IS 1608:2005, IS 1599:1985 (Reaffirmed 2006)

Date of test : 16.10.2020

S.No	Brand	Nominal size (dia in mm)	Mass per metre (kg/metre)	TENSILE STRENGTH		
				0.20 % proof stress/ yield stress ($N/mm^{2)}$	Tensile strength ($N/mm^{2)}$	Elongation, percent on gauge length
1	Fe 500	8	0.33	536	546	15
2	Fe 500	10	0.65	550	561	17

Remarks:

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